

To the knowledge of the fauna of click-beetles (Coleoptera: Elateridae) of the Siberia and Far East of Russia

К познанию фауны жуков-щелкунов (Coleoptera: Elateridae) Сибири и Дальнего Востока России

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KEY WORDS: click-beetles, Coleoptera, Elateridae, fauna, Siberia, Far East.

КЛЮЧЕВЫЕ СЛОВА: жуки-щелкуны, Coleoptera, Elateridae, фауна, Сибирь, Дальний Восток.

ABSTRACT: New data on the fauna of some rare and little-known click-beetles from Siberia and Far East of Russia are given. *Orthostethus sieboldi* (Cand.), *Gamepenthes pictipennis* (Lew.), *G. versipellis* (Lew.), *Melanotus correctus* Cand., *M. koikei* Kishii et Ôh., *M. legatoides* Kishii, *Stenagostus umbratilis* (Lew.) are recorded for fauna of Russia for the first time. Genera *Orthostethus* and *Gamepenthes* are new for the fauna of Russia.

РЕЗЮМЕ: Приводятся новые данные по фауне редких и малоизученных видов жуков-щелкунов Сибири и Дальнего Востока России. *Orthostethus sieboldi* (Cand.), *Gamepenthes pictipennis* (Lew.), *G. versipellis* (Lew.), *Melanotus correctus* Cand., *M. koikei* Kishii et Ôh., *M. legatoides* Kishii и *Stenagostus umbratilis* (Lew.) впервые указаны для фауны России. Рода *Orthostethus* и *Gamepenthes* впервые указаны для фауны России.

Introduction

Fauna of click-beetles (Elateridae) of Siberia and Far East of Russia were being rather intensely studied for a long time. There are many general works and faunal lists dealing with it [Cherepanov, 1957; Gurjeva, 1967, 1974, 1979; 1989a; 1989b; Gurjeva & Krivolutskaya, 1968; Bessolitzina, 1974; Averenskiy & Gurjeva, 1975; Katukha, 1977; Matis, 1980; Prosvirov, 2009]. In spite of this, many elaterids of that region still remain little-studied from faunistic and taxonomic sides. Particularly, numerous species of click-beetles from subfamilies Elaterinae, Denticollinae, Cardiophorinae and Negastriinae were described from territory of Far East and Siberia in recent years [Dolin, 1992, 2003; Dolin & Šauša, 1997; Platia & Gudenzii, 1999, 2005, 2006, 2009]. Therefore, subsequent faunistic researches of Elateridae in that region will be undoubtedly interesting.

As a result of studying of collections of different organizations, own collecting material and materials obtaining from colleagues we found many rare and new species of Elateridae for fauna of Siberia and Far East. Annotated list of these species is presented below.

Materials and methods

Main material of this work consist of elaterids obtained from colleagues, own collecting material and specimens from collections of Department of Entomology of Moscow State University and Zoological Museum of Moscow State University (ZMMU).

Photographs of click-beetles was taken by Canon EOS-40D camera with objective Canon MP-E 65 mm. Extended focus technology was used at shooting. Drawings of genitals was made from glycerine mounts. Procedure of making mounts was described by us previously [Prosvirov & Savitsky, 2011].

Annotated species list

In the present list included data on the distribution of species, as well as information on the diagnostic characters of some little-known species. In the certain cases necessary remarks on the systematics of some taxa also was given. Species are recorded for fauna of Russia for the first time marked by asterisk.

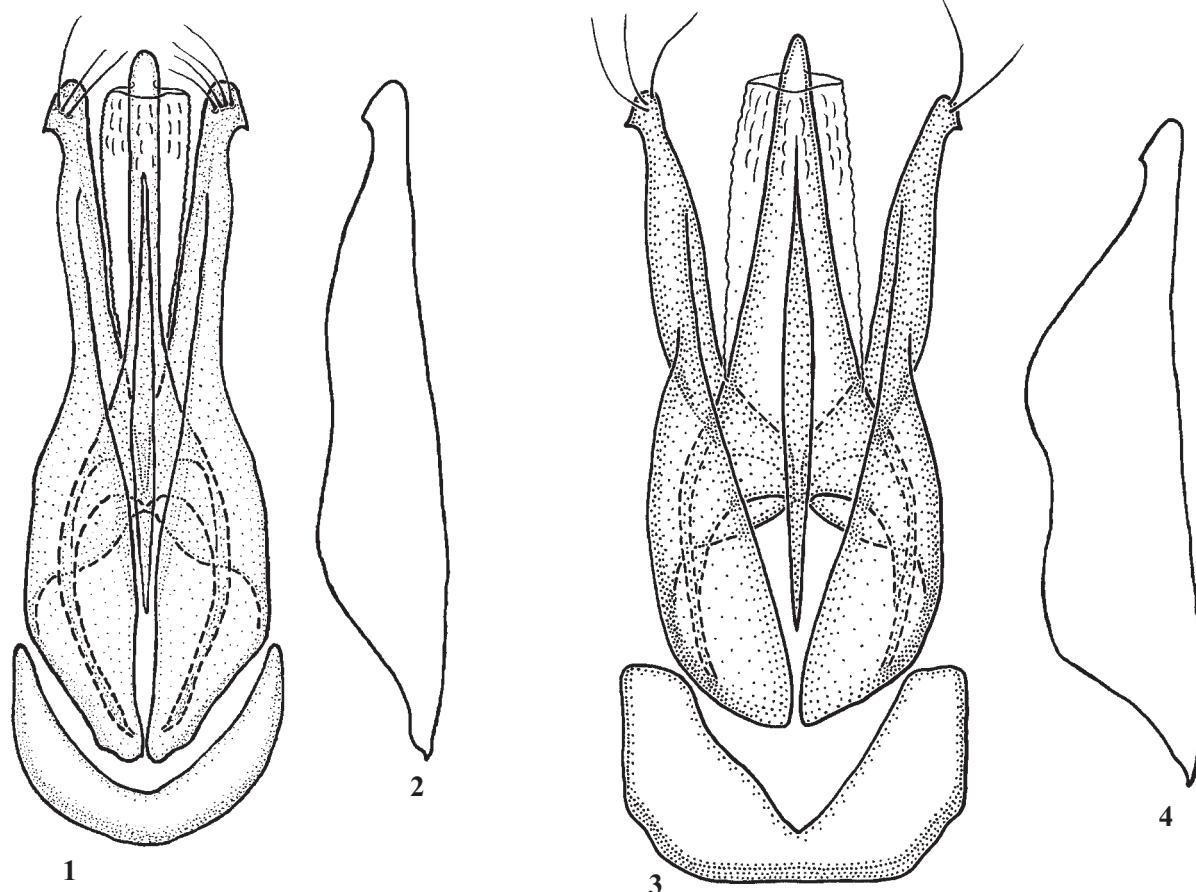
Subfamily Agrypninae

Agrypnus binodulus (Motschulsky, 1861)
Figs 1–5

MATERIAL. Sakhalin Area, Kunashir Is., Mendeleevo vill. env., V.1977 (A.V. Kompartzev), 1 ex.; in the same place, 20.VII.1977 (A.V. Kompartzev), 2 ex; Tretjakovo vill., 5.VII.1977 (S. Korolev), 1 ex.; near Mendeleevo vill., 15-th km, sulfury springs, 7.VII.1985 (N.B. Nikitsky), 1 ex.

DISTRIBUTION. The species is known from Far East of Russia, North and South Korea, China and Japan [Cate et al., 2007]. This is first record of *A. binodulus* for the fauna of Kunashir Island.

REMARKS. The specimens from Kunashir Island have notably distinct structure of aedeagus than that one from Primorsky Province (Figs 1–2 vs 3–4). There are two known subspecies of *A. binodulus*: *A. binodulus binodulus* and *A. binodulus coreanus* Kishii, 1961. Japanese authors give pictures of the male genitalia of both subspecies, but in different articles drawings of aedeagus of the same subspecies markedly differ [Kishii, 1977b; Ôhira, 2002]. Moreover, there are some contradictions concerning of ranges of subspecies of *A. binodulus* in literature. Japanese authors indicate *A. binodulus binodulus* for the territory of Japan and *A. binodulus coreanus* for the territory of Tsushima Island and Korea [Kishii, 1987, 1999; Ôhira, 2002]. In the catalogue of palaearctic Coleoptera [Cate et al., 2007] nomionotypical subspecies was shown for the territory of Far East of Russia, Japan, China, North and South Korea and *A. binodulus coreanus* indicate for the territory of China, Tsushima Island, North and South Korea. In order to solve the problem of the systematic position and distribution of these taxa examination of additional material from different points of areal of *A. binodulus* is needed. Probably, in fact, we deal with two distinct species.



Figs 1–4. *Agrypnus binodulus*, aedeagus: 1–2 — Kunashir Is.; 3–4 — Primorsky Prov.; 1, 3 — ventral view; 2, 4 — lateral view.
Рис. 1–4. *Agrypnus binodulus*, эдеагус: 1–2 — о-в Кунашир; 3–4 — Приморский край; 1, 3 — снизу; 2, 4 — сбоку.

Agrypnus cordicollis (Candèze, 1865)

Fig. 6

MATERIAL. Sakhalin Area, Kunashir Is., Stolbovskye springs, S of Stolbchatyi cape, 44°00'26" N, 145°40'59" E, 9.VI.2011 (I.V. Melnik), 1 ex.; Tretjakovo vill. env., valley and right source of Valentina's stream, 43°59'09" N, 145°39'15" E–43°58'38" N, 145°40'39" E, 19.VI.2011 (A.V. Matalin), 1 ex.; in the same place, 10.VIII.2011 (K.V. Makarov, A.A. Zaitsev), 3 ex.; Tretjakovo vill. env., valley of Valentina's stream, window trap, 43°59'05" N, 145°39'29" E, 10–14.VIII.2011 (K.V. Makarov, A.A. Zaitsev), 1 ex.

DISTRIBUTION. This species is recorded from territory of Japan, Korea and China [Cate et al., 2007], recently it was indicated for the fauna of Russia on the basis of 3 specimens from Kunashir Island [Prosvirov & Savitsky, 2011]. New findings shown that *A. cordicollis* is a rather common species on the territory of Kunashir Island.

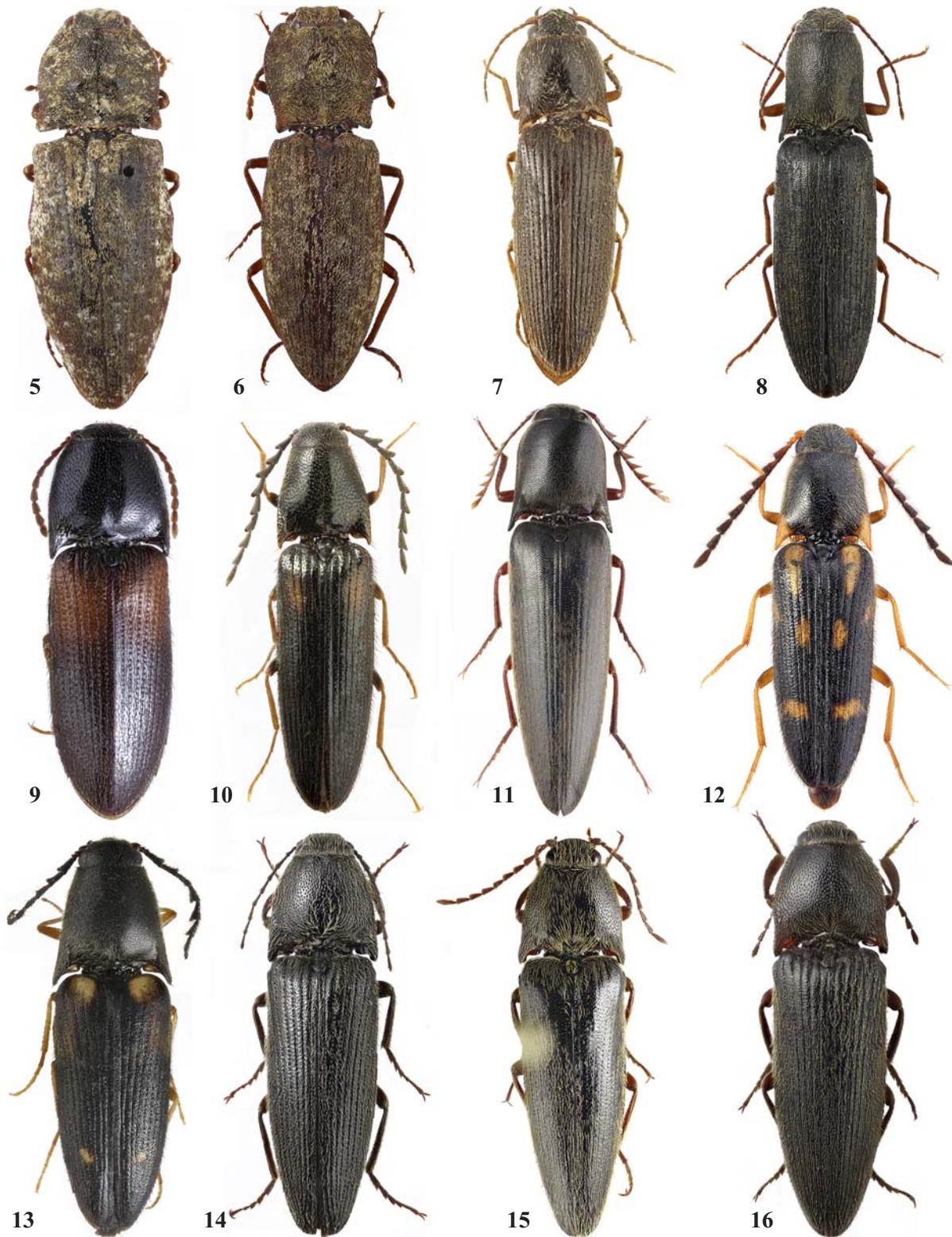
Subfamily Elaterinae

Silesis improvisus Gurjeva, 1976

Fig. 7

MATERIAL. Primorsky Prov., 8 km E of Khasan town, Golybi-nyi Utes mound env., 42°24'51" N, 130°44'54" E, 1–8.VII.2000 (I.V. Melnik), 1 ex.

DISTRIBUTION. *S. improvisus* is recorded for the Khabarovsk Province, Primorsky Province and Korea on the basis of single findings [Gurjeva, 1979].



Figs 5–16. Elateridae spp., habitus: 5 — *Agrypnus binodulus* (Kunashir Is.); 6 — *A. cordicollis* (Kunashir Is.); 7 — *Silesis improvisus* (Primorsky Prov.); 8 — *Ectinus puberulus* (Kunashir Is.); 9 — *Ampedus lepidus* (Amur Prov.); 10 — *Ishnodes sibiricus* (Amur Prov.); 11 — *Orthostethus sieboldi* (Kunashir Is.); 12 — *Gamepenthes pictipennis* (Kunashir Is.); 13 — *G. versipellis* (Kunashir Is.); 14 — *Melanotus correctus* (Kunashir Is.); 15 — *M. koikei* (Kunashir Is.); 16 — *M. legatoides* (Kunashir Is.).

Рис. 5–16. Elateridae spp., габитус: 5 — *Agrypnus binodulus* (о-в Кунашир); 6 — *A. cordicollis* (о-в Кунашир); 7 — *Silesis improvisus* (Приморский край); 8 — *Ectinus puberulus* (о-в Кунашир); 9 — *Ampedus lepidus* (Амурский край); 10 — *Ishnodes sibiricus* (Амурский край); 11 — *Orthostethus sieboldi* (о-в Кунашир); 12 — *Gamepenthes pictipennis* (о-в Кунашир); 13 — *G. versipellis* (о-в Кунашир); 14 — *Melanotus correctus* (о-в Кунашир); 15 — *M. koikei* (о-в Кунашир); 16 — *M. legatoides* (о-в Кунашир).

Ectinus puberulus (Miwa, 1928)
Figs 8, 17

MATERIAL. Sakhalin Area, Kunashir Is., caldera of Golovnina volcano, SW shore of Goryachee lake, 43°52'21" N, 145°29'15" E, 22.VII.2011 (K.V. Makarov, A.A. Zaitsev), 1 ex.; mounds from S of Stolbchatyi cape, 44°00'20" N, 145°42'05" E, ca. 193 m, 44°00'42" N, 145°40'39" E, ca. 18 m, 23.VIII.2008 (I.V. Melnik), 1 ex.; Tretjakovo vill. env., valley of Valentina's stream, 43°59'09" N 145°39'15" E, 43°58'59" N, 145°39'46" E, 30.VIII.2009 (A.S. Prosvirov), 1 ex.; in the same place, 19.IX.2009 (A.S. Prosvirov), 1 ex.

DISTRIBUTION. This species is common in Japan [Gurjeva, 1979; Kishii, 1987]. Platia [2010] records one specimens of *E. puberulus* for the territory of Russia from Kunashir Island («Xejolovnina vulcan» (Golovnina volcano?)).

REMARKS. Habitus of that species is similar to that one of *E. piloselloides* (Schwarz, 1891). These species are clearly distinguished by proportions of antennal segments, punctures of pronotum, structure of aedeagus and arm of bursa copulatrix [Gurjeva, 1979; Kishii, 1984] (Fig. 17).

Ampedus lepidus (Mäklin, 1878)
Fig. 9

MATERIAL. Khabarovsk Prov., downstream of Verhnyi Melgin River near first rapid, 300–350 m, mosses and litter, 18.VIII.2009 (A.B. Ryvkin), 1 ex.; Amur Prov., Norsky reserve (guard band), basin of Burunda River, 2 km SE of Burunda cordon, litter in larch forest, 22.IX.2004 (A.B. Ryvkin), 1 ex.; Norsky reserve, basin of Nora River near Maltzevsky cordon, east shore of Maltzevsky lake, 210 m, mosses and litter, 1.X.2008 (E.M. Veselova, A.B. Ryvkin), 1 ex.

DISTRIBUTION. *A. lepidus* is known from North Europe and taiga zone of Russia through Transbaikalia [Gurjeva, 1989a; Cate et al., 2007]. This is the first records of that species from Khabarovsk Province and Amur Province.

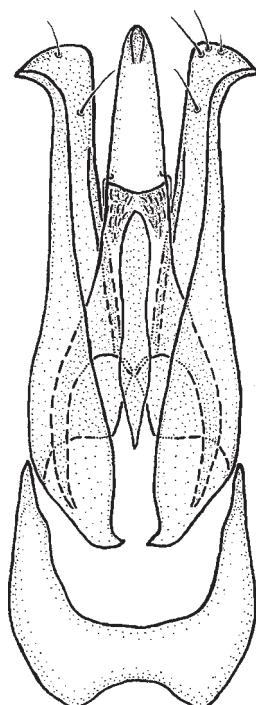


Fig. 17. *Ectinus puberulus* (Miwa), aedeagus, ventral view.
Рис. 17. *Ectinus puberulus* (Miwa), эдеагус, снизу.

Ischnodes sibiricus Tsherepanov, 1966
Fig. 10

MATERIAL. Khabarovsk Prov., «Hehzir», white rot of ash, 17.05.1976 (T.V. Gusakova), 1 ex.; Amur Prov., Norsky reserve, basin of Nora River near Maltzevsky cordon, netting on herbage and bushes in birch forest, 17.VI.2005 (E.M. Veselova, A.B. Ryvkin), 1 ex.

DISTRIBUTION. *I. sibiricus* is a rare species, known only on few specimens from Udmurtia, West Siberia, Kamchatka and Primorsky Province [Gurjeva, 1979, 1989a; Dedyukhin & Nikitsky, 2009]. This is the first records of that species from Khabarovsk Province and Amur Province.

**Orthostethus sieboldi sieboldi* (Candèze, 1873)
Fig. 11

MATERIAL. Sakhalin Prov., Kunashir Is., Tretjakovo vill. env., valley of Valentina's stream, 43°59'09" N 145°39'15" E, 43°58'59" N, 145°39'46" E, 30.VIII.2009 (I.V. Melnik), 1 ex.; in the same place, in the wood of lying trunk (brown rot), 20.IX.2009 (A.S. Prosvirov), 2 larvae.

DISTRIBUTION. *O. sieboldi* is known from Japan, China and Korea [Cate et al., 2007]. This species and genus are recorded from territory of Russia for the first time.

**Gamepenthes pictipennis* (Lewis, 1894)
Fig. 12

MATERIAL. Sakhalin Area, Kunashir Is., Alekhina cape, south slope, mouth of Alekhina River, 43°55'30" N, 145°32'44" E, ca. 104 m; 43°55'13" N, 145°31'53" E, 22.VIII.2009 (I.V. Melnik), 1 ex.

DISTRIBUTION. *G. pictipennis* is known from Japan [Cate et al., 2007]. This species and genus are recorded from territory of Russia for the first time.

**Gamepenthes versipellis* (Lewis, 1894)
Fig. 13

MATERIAL. Sakhalin Area, Kunashir Is., Tretjakovo vill. env., valley of Valentina's stream, 43°59'09" N 145°39'15" E, 43°58'59" N, 145°39'46" E, 19.IX.2009 (A.S. Prosvirov), 1 ex.

DISTRIBUTION. *G. versipellis* is known from Japan, China and Oriental Region [Cate et al., 2007]. This is first record of that species from territory of Russia.

Subfamily Melanotinae

**Melanotus* (s.str.) *correctus* *correctus* Candèze, 1865
Fig. 14

MATERIAL. Sakhalin Area, Kunashir Is., Tretjakovo vill. env., valley of Valentina's stream, 43°59'09" N, 145°39'15" E–43°58'59" N, 145°39'46" E, 24.V.2011 (I.V. Melnik), 1 ex.; in the same place, 10.VIII.2011 (K.V. Makarov, A.A. Zaitsev), 2 ex.; Tretjakovo vill. env., valley and right source of Valentina's stream, 43°59'09" N, 145°39'15" E–43°58'38" N, 145°40'39" E, 19.VI.2011 (A.V. Matalin), 2 ex.; valley and left source of Valentina's stream, 43°59'09" N, 145°39'15" E–43°59'02" N, 145°40'39" E, 19.VI.2011 (I.V. Melnik), 2 ex.; Tretjakovo vill. env., 43°59'17" N, 145°39'05" E, 20.VIII.2008 (I.V. Melnik), 1 ex.; bay on SW of Odinoky stream, 43°54'36" N, 145°30'25" E, 5.VIII.2011 (K.V. Makarov, A.A. Zaitsev), 1 ex.

DISTRIBUTION. This species is known from Japan [Cate et al., 2007] and recorded for the fauna of Russia for the first time.

**Melanotus* (s.str.) *legatoides* Kishii, 1975
Fig. 16

MATERIAL. Sakhalin Area, Kunashir Is., Tretjakovo vill. env., valley of Valentina's stream, window trap, 43°59'05" N, 145°39'29" E, 10–14.VIII.2011 (K.V. Makarov, A.A. Zaitsev), 1 ex.

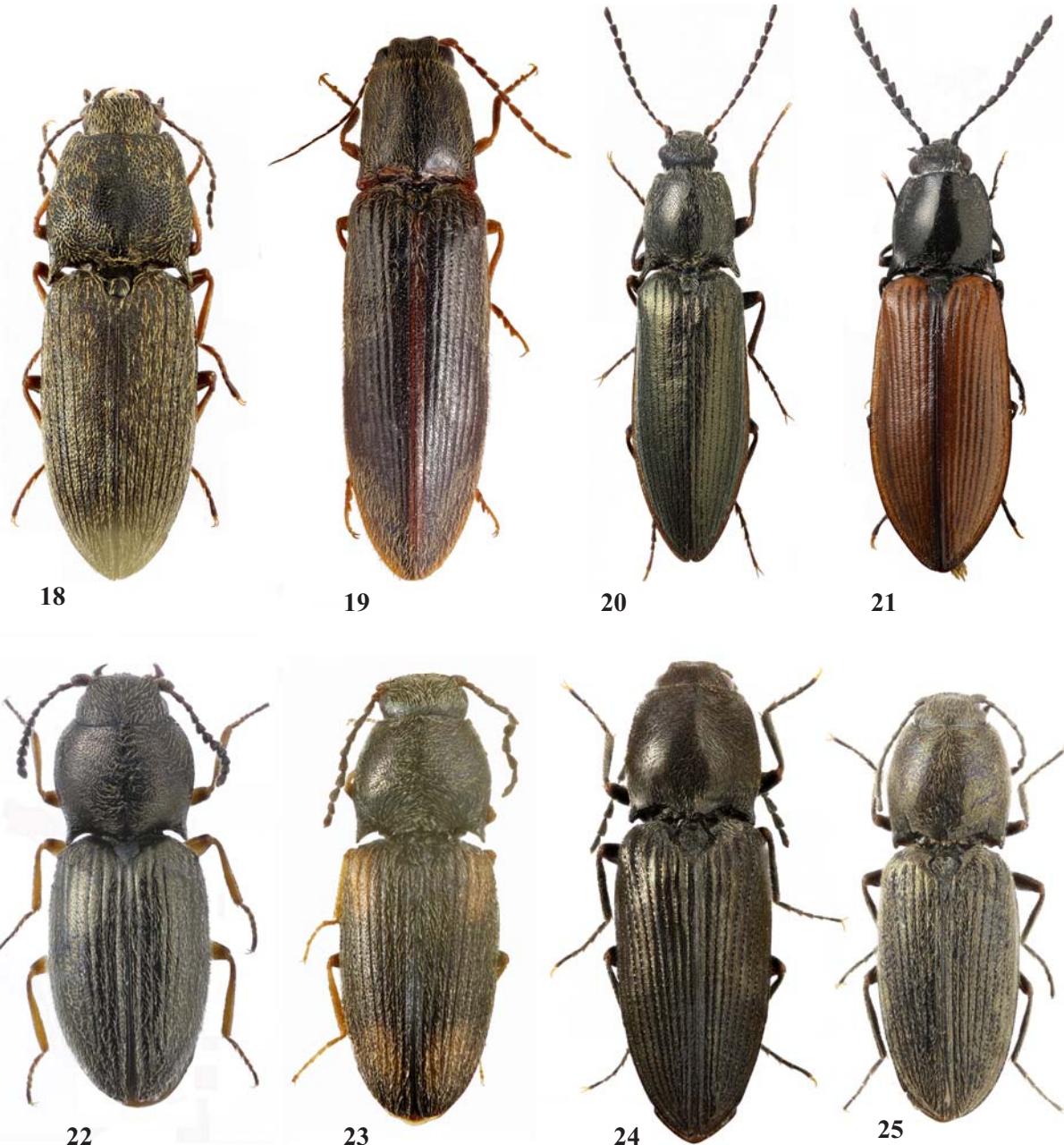
DISTRIBUTION. This species is known from Japan [Cate et al., 2007] and recorded from territory of Russia for the first time.

REMARKS. At the first glance this species is similar to *M. legatus* Candèze, 1860, also known from Kunashir Island [Miwa, 1934; Gurjeva & Krivolutskaya, 1968; Kishii, 1987]. These species clearly differ from each other by structure of male and female genitalia [Kishii, 1975; Ôhira, 2001]. Probably, some records of *M. legatus* from Kunashir Island based on the wrong determination and in fact concerning to *M. legatoides*.

**Melanotus (Spheniscosomus) koikei* Kishii et Ôhira, 1956
Fig. 15

MATERIAL. Sakhalin Area, Kunashir Is., Tretjakovo vill. env., 43°59'17" N, 145°39'05" E, 30.VIII.2009 (A.A. Zaitsev), 1 ex.

DISTRIBUTION. This species is known from Japan [Cate et al., 2007] and recorded from territory of Russia for the first time.



Figs 18–25. Elateridae spp., habitus: 18 — *Ligmargus aeneoniger* (Sakhalin Is.); 19 — *Stenagostus umbratilis* (Kunashir Is.); 20 — *Poemnites hamirensis* (Altai Rep.); 21 — *Pseudanostirus amurensis* (Buryat Rep.); 22 — *Neohypdonus musculus* (Commander Is.); 23 — *Oedostethus varians* (Jewish AO); 24 — *Cardiophorus vulgaris* (Kunashir Is.); 25 — *Paracardiophorus pullatus* (Kunashir Is.).

Рис. 18–25. Elateridae spp., габитус: 18 — *Ligmargus aeneoniger* (о-в Сахалин); 19 — *Stenagostus umbratilis* (о-в Кунашир); 20 — *Poemnites hamirensis* (Респ. Алтай); 21 — *Pseudanostirus amurensis* (Респ. Бурятия); 22 — *Neohypdonus musculus* (Командорские о-ва); 23 — *Oedostethus varians* (Еврейская АО); 24 — *Cardiophorus vulgaris* (о-в Кунашир); 25 — *Paracardiophorus pullatus* (о-в Кунашир).

Subfamily Hypnoidinae

Ligmargus aeneoniger aeneoniger (Miwa, 1928)
Fig. 18

MATERIAL. Sakhalin Area, Sakhalin Is., 14 km WNW of Lesnoe vill., valley of Peskovka River, 46°57'33" N, 142°54'34" E, 23–30.VI.2003 (I.V. Melnik), 3 ex.; Kunashir Is., valley of Kislyi stream lower of sulfury springs, 44°00'36" N, 145°46'04" E–43°59'56" N, 145°46'02" E, 18.VI.2011 (A.V. Matalin), 1 ex.

DISTRIBUTION. *L. aeneoniger* is known from Japan [Cate et al., 2007]. Gurjeva [1972] described this species as *Hypolithus kuriensis* based on two specimens from Kunashir Island. Synonymy of both names was established by Ôhira [1985]. This is the first record of that species from Sakhalin Island.

Subfamily Denticollinae

**Stenagostus umbratilis* (Lewis, 1894)
Fig. 19

MATERIAL. Sakhalin Area, Kunashir Is., caldera of Golovnina volcano, west extremity of Goryachee lake, cordon Ozerny env., 43°52'26" N, 145°28'56" E, 15.VIII.2009 (G.Yu. Antonov), 1 ex.; Alekhina cape, south slope, window trap, 43°55'22" N, 145°32'27" E, 1–5.VIII.2011 (K.V. Makarov, A.A. Zaitsev), 1 ex.

DISTRIBUTION. This species is known from Japan and South Korea [Cate et al., 2007] and recorded from territory of Russia for the first time.

Poemnites hamirensis (Tsherepanov, 1957)
Fig. 20

MATERIAL. Altai Republic, Ustj-Koksa vill. env., 14.VI.2010 (M.G. Bush), 2 ex.; spurs of Kholzun Mtr., near sources of Malaya Kolbina River, 1650–1900 m, 12–14.VI.2005 (A.G. Koval), 2 ex.

DISTRIBUTION. *P. hamirensis* is a rare species known from territory of Mongolia, Kazakhstan and Altai Republic on the territory of Russia [Gurjeva, 1989b; Tegshzhargal, 1989; Cate et al., 2007].

Pseudanostirus amurensis (Jagemann, 1942)
Fig. 21

MATERIAL. Buryat Republic, Barguzinsky reserve, valley of Davshe River, 22–23.VI.2003 (T.L. Ananina), 1 ex.

DISTRIBUTION. *P. amurensis* is known from Amur Province, Khabarovsk Province and Primorsky Province [Gurjeva, 1989a; 1989b; Cate et al., 2007; Prosvirov, 2009]. This is the first record of that species for the Buryat Republic.

Subfamily Negastriinae

Neohypdonus musculus (Eschscholtz, 1829)
Fig. 22

MATERIAL. Kamchatka Prov., Commander Is., Medny Is., near Preobrazhenskoe vill., 31.VIII.1953 (S. Marakov), 2 ex.; from SE to Preobrazhenskoe vill., 15–20.IX.1953 (S. Marakov), 1 ex.; Bering Is., Nikolskoe vill. env., Vkhodnoi rif cape, seashore, under stones, 15.VII.2012 (A.S. Sazhnev), 3 ex.

DISTRIBUTION. This species was not included in the catalogue of palaearctic Coleoptera [Cate et al., 2007], but records of *N. musculus* from Commander Islands are known [Jacobson, 1913; Matis, 1980, both as *Hypnoidus*]. Main range of that species is situated on the territory of Canada and Aleutian Islands [Matis, 1980, as *Hypnoidus*].

Oedostethus varians (Gurjeva, 1968)
Fig. 23

MATERIAL. Jewish Autonomous Region, Obluchensky distr., bank of Amur River from Radde vill. to Belya River, 26.VII.2004 (I.V. Melnik), 3 ex.; Khabarovsk Prov., Khabarovsk town, 6.VI.2003 (I.V. Melnik), 2 ex.

DISTRIBUTION. This species is known from Mongolia, China [Cate et al., 2007], Tuva and Primorsky Province on the territory of Russia [Gurjeva, 1975, as *Negastrius*; Prosvirov, 2009]. This is the first records of *O. varians* from Jewish Autonomous Region and Khabarovsk Province.

Subfamily Cardiophorinae
Cardiophorus vulgaris Motschulsky, 1860
Fig. 24

MATERIAL. Sakhalin Area, Kunashir Is., mouth of Ozernaya River, 43°53'07" N, 145°27'44" E, 27.V.2011 (A.V. Matalin), 1 ex.; Stolbovskye springs S of Stolbchatyi cape, 44°00'26" N, 145°40'59" E, 9.VI.2011 (A.V. Matalin), 5 ex.; in the same place, 9.VI.2011 (I.V. Melnik), 1 ex.; near Mendeleev villa, 15-th km, sulfury springs, 29.VI.1985 (N.B. Nikitsky), 3 ex.; mounds between Severyanka and Zolotaya Rivers, 1.VII.2008 (I.V. Melnik), 1 ex.; caldera of Golovnina volcano, Goryachee lake, 43°50'22.7" N, 145°24'39.9" E, 12–20.VII.2008 (I.V. Melnik), 1 ex.; caldera of Golovnina volcano, SW shore of Goryachee lake, 43°52'21" N, 145°29'15" E, 22.VII.2011 (K.V. Makarov, A.A. Zaitsev), 1 ex.; valley of Ozernaya River, 43°52'26" N, 145°28'56", ca. 120 m, 43°52'37" N, 145°28'33" E, 23.VII.2008 (I.V. Melnik), 1 ex.; Ivanovsky cordon env., 43°50'23" N, 145°24'40" E, 8–15.VIII.2008 (I.V. Melnik), 1 ex.; Alekhina cape, south slope, mouth of Alekhina river, 43°55'30" N, 145°32'44" E, ca. 104 m; 43°55'13" N, 145°31'53" E, 19.VIII.2009 (K.V. Makarov, A.A. Zaitsev), 1 ex.; coast of sea of Okhotsk, 3 km SW of Alekhina cape, 43°54'17" N, 145°29'56" E, 20.VIII.2009 (A.S. Prosvirov), 1 ex.

DISTRIBUTION. *C. vulgaris* is known from Far East of Russia and Mongolia [Cate et al., 2007]. This is the first record of that species from Kunashir Island.

Paracardiophorus pullatus pullatus (Candèze, 1873)
Figs 25–26

MATERIAL. Sakhalin Area, Kunashir Is., mouth of Ozernaya River, 43°53'07" N, 145°27'44" E, 27.V.2011 (A.V. Matalin), 1 ex.; Tretjakovo Vill. env., valley and right source of Valentina's stream, 43°59'09" N, 145°39'15" E–43°58'38" N, 145°40'39" E, 19.VI.2011 (A.V. Matalin), 1 ex.; Tretjakovo Vill. env., valley and left source of Valentina's stream, 43°59'09" N, 145°39'15" E–43°59'02" N, 145°40'39" E, 19.VI.2011 (I.V. Melnik), 9 ex.; Tretjakovo Vill. env., valley of Valentina's stream, 43°59'09" N, 145°39'15" E–

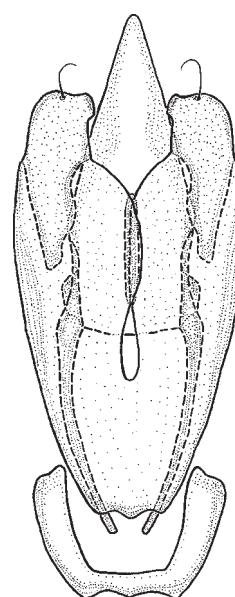


Fig. 26. *Paracardiophorus pullatus*, aedeagus, ventral view.
Рис. 26. *Paracardiophorus pullatus*, эдеагус, снизу.

43°58'59" N, 145°39'46" E, 10.VIII.2011 (K.V. Makarov, A.A. Zaitsev), 5 ex.; in the same place, 17.VIII.2008 (I.V. Melnik), 3 ex.; in the same place, on absinth, 30.VIII.2009 (A.S. Prosvirov), 2 ex.; mounds between Severyanka and Zolotaya rivers, 1.VII.2008 (I.V. Melnik), 1 ex.; caldera of Golovnina volcano, shore of Goryachee lake, on inflorescence of *Reynoutria sachalinense*, 27.VIII.2009 (A.S. Prosvirov), 4 ex.

DISTRIBUTION. *P. pullatus* is known from Far East of Russia, Mongolia, Japan and Corea [Cate et al., 2007]. It was recorded for the fauna of Kunashir Island on the basis of findings from two points [Gurjeva & Krivolutskaya, 1968]. In fact that species is very common on the territory of the island.

REMARKS. *P. pullatus* clearly differs from allied species only by structure of paramera of aedeagus and arm of bursa copulatrix [Kishii, 1977a; Ôhira, 1997] (Fig. 26). Probably, some records of that species from territory of Russia [for instance: Bessolitzina, 1987; Katukha, 1977] were based on the wrong determination and range of *Paracardiophorus pullatus* is needed in clarification.

ACKNOWLEDGEMENTS. The author would like to express his sincere thanks to M.G. Bush, A.A. Zaitsev, A.V. Kompantzev, K.V. Makarov, A.V. Matalin, I.V. Melnik, A.B. Ryvkin, (Moscow), A.G. Koval (St. Petersburg), A.S. Sazhnev (Saratov), G.Yu. Antonov (Yuzhno-Kurilsk) for supplying the material. I am indebted to Mr. I. Gudzeni (Forli), Mr. H. Jui-Fan (Taipei), Mr. J. Mertlik (Hradec Králové), Dr. G. Platia (Gatteo), Dr. Tae Man Han (Suwon) for providing the necessary literature. I especially acknowledge of K.V. Makarov for invaluable helping in the preparation of photographs for present publication and V.Yu. Savitsky (Moscow) for important suggestions and comments on the manuscript. Finally, I would like to thank S.N. Lysenkov (Moscow) for his revision and correction of english text.

Literature

- Averenskiy A.I. & Gurjeva E.L. 1975. [Notes on the fauna and ecology of click-beetles (Coleoptera, Elateridae) of the South Yakutia forests] // Nasekomye srednei taygi Yakutii. Yakutsk: Izdanie Yakutskogo filiala SO AN SSSR. P.32–26 [in Russian].
- Bessolitzina E.P. 1974. [Fauna of click-beetles (Coleoptera, Elateridae) of the Irkutsk Region] // Fauna nasekomykh Vostochnoi Sibiri i Dal'nego Vostoka. Irkutsk: Izdatelstvo IGY. P.77–104 [in Russian].
- Bessolitzina E.P. 1987. [The click-beetles (Coleoptera, Elateridae) of mountain taiga areas] // Nasekomye zony BAM. Novosibirsk: Nauka. Sibirskoe otdelenie. P.17–28 [in Russian].
- Cate P.C., Sánchez-Ruiz A., Löbl I. & Smetana A. 2007. Elateridae // Catalogue of Palaearctic Coleoptera (I. Löbl, A. Smetana eds.). Vol.4. Elateroidae – Derodontoidae – Bostrichoidea – Lymexyloidea – Cleroidea – Cucujooidea. Stenstrup: Apollo Books. P.89–209.
- Cherepanov A.I. 1957. [The click-beetles of West Siberia (Coleoptera, Elateridae)]. Novosibirsk: Novosibirskoe knizhnoe izdatelstvo. 382 pp [in Russian].
- Dedyukhin S.V. & Nikitsky N.B., 2009. Materials on some rare xylophilous beetle species (Insecta, Coleoptera) of Udmurtia // Eurasian Entomological Journal. Vol.8. No.2. P.217–225 [in Russian].
- Dolin V.G. 1992. [New species of the elaterid genus *Oedostethus* Lec. (Coleoptera, Elateridae, Negastriinae) from the Siberia and Far East] // Nasekomye Daurii i sopredelnykh territorii. Sbornik naychnykh rabot TSNIL ohotnich'ego hozyaistva i zapovednikov. Moskva. P.13–21 [in Russian].
- Dolin V.G. 2003. Einige neue ostpaläarktische Elateriden-Arten (Coleoptera, Elateridae) // Zeitschrift der Arbeitsgemeinschaft Österreichischer Entomologen. Bd.55. S.29–38.
- Dolin W. & Šauša O. 1997. Zwei neue Arten (Coleoptera: Elateridae) aus dem Fernen Osten Rußlands // Zeitschrift der Arbeitsgemeinschaft Österreichischer Entomologen. Bd.49. No.1–2. S.41–44.
- Gurjeva E.L. 1967. [The click-beetles (Coleoptera, Elateridae) of the Amur-Zeya plateau] // Trydy ZIN AN SSSR. Vol.41. Vrednye i poleznye nasekomye Dal'nego Vostoka. Leningrad: Nauka. P.134–138 [in Russian].
- Gurjeva E.L. 1972. [New species of click beetles (Coleoptera, Elateridae) from the USSR and adjacent territories] // Trydy ZIN AN SSSR. Vol.52. Novye vidy morskikh i nazemnykh besponochnykh. Leningrad: Nauka. P.299–308 [in Russian].
- Gurjeva E.L. 1974. [To the fauna of click-beetles (Coleoptera, Elateridae) of the Primorsky Province] // Materialy sed'mogo sjezda VEO. Pt.1. Leningrad. P.26–27 [in Russian].
- Gurjeva E.L. 1975. [New and little-known species of the elaterid genus *Negastrius* Thoms. (Coleoptera, Elateridae) from Tuva] / / Novye i maloizvestnye vidy fauny Sibiri. Fasc.9. Novosibirsk: Nauka. P.47–49 [in Russian].
- Gurjeva E.L. 1979. [The click-beetles (Elateridae). Subfamily Elaterinae. Tribes Megapenthini, Physorhinini, Ampedini, Elaterini, Pomachiliini]. Fauna SSSR. Zhestkokrylye. Vol.12. Fasc.4. Leningrad: Nauka. 453 pp [in Russian].
- Gurjeva E.L. 1989a. [Fam. Elateridae – Click-beetles] // Opredelitel nasekomykh Dal'nego Vostoka SSSR. Vol.3. Zhestkokrylye ili zhyki. Pt.1. Leningrad: Nauka. P.489–534 [in Russian].
- Gurjeva E.L. 1989b. [The click-beetles (Elateridae). Subfamily Athoinae. Tribe Ctenicerini]. Fauna SSSR. Zhestkokrylye. Vol.12. Fasc.3. Leningrad: Nauka. 295 pp [in Russian].
- Gurjeva E.L. & Krivolutskaya G.O. 1968. [The fauna of click-beetles of the Kurile Islands] // Fauna i ekologiya nasekomykh Dal'nego Vostoka. Vladivostok: Biologo-Pochvennyi institut dal'nevostochnogo filiala SO AN SSSR. P.42–49 [in Russian].
- Jacobson G.G. 1913. [Beetles of Russia and West Europa. Manual to the determination of beetles]. Sankt-Peterburg: Izdanie A.Ph. Devriena. P.721–864. 8 tab. [in Russian].
- Katukha S.A. 1977. [To the fauna of click-beetles (Coleoptera, Elateridae) of the South Sakhalin] // Vestnik zoologii. No.1. P.58–63 [in Russian].
- Kishii T. 1975. Some new forms of Elateridae in Japan (VIII) // Bulletin of the Heian High School. No.19. P.1–7. 2 pls.
- Kishii T. 1977a. Some new forms of Elateridae in Japan (XII) // The Scientific Reports of Kyôto Prefecture. No.15. P.49–61.
- Kishii T. 1977b. Elaterid Beetles from Europe collected by Mr. A. Shinohara with descriptions of some new forms and notes // Bulletin of the Heian High School. Kyôto. No.21. P.19–34. 5 pls.
- Kishii T. 1984. The Elaterid-beetles of the tribe Agriotini from Japan (Coleoptera: Elateridae, Elaterinae). “The Elateridae of Japan, 1” // Bulletin of the Heian High School. Kyôto. No.28. P.11–77. 2 pls.
- Kishii T. 1987. A taxonomic study of the Japanese Elateridae (Coleoptera), with the keys to the subfamilies, tribes and genera. T. Kishii. Kyoto. 262p.
- Kishii T. 1999. A check-list of the family Elateridae from Japan (Coleoptera) // Bulletin of the Heian High School. Kyôto. No.42. P.1–144.
- Matis E.G. 1980. [Review of the fauna of click-beetles (Coleoptera, Elateridae) of the North-East of USSR] // Issledovaniya po entomofaune Severo-Vostoka SSSR. Vladivostok: DVNTS AN SSSR. P.3–22 [in Russian].
- Miwa Y. 1934. The fauna of Elateridae in the Japanese Empire // Department of Agriculture Government Research Institute. Report No.65. Formosa. P.1–289. 9 pls.
- Ôhira H. 1985. Notes on some elaterid-beetles from Hokkaido and its adjacent regions (I) // Jezoensis. No.12. P.94–97.
- Ôhira H. 1997. Notes on *Paracardiophorus pullatus* and its allied species from Japan (Coleoptera: Elateridae) // Miscellaneous Reports of the Hiwa Museum for Natural History. No.35. P.1–16. 14 pls.
- Ôhira H. 2001. Notes on the morphological structure of the female internal reproductive organs of the *Melanotus* species in Japan (Coleoptera: Elateridae) // Miscellaneous Reports of the Hiwa Museum for Natural History. No.40. P.17–27. 8 pls.

- Ôhira H. 2002. Notes on the morphological structure of *Agrypnus* species from Japan (I) (Coleoptera: Elateridae, Agrypninae, *Agrypnus*) // Miscellaneous Reports of the Hiwa Museum for Natural History. No.41. P.53–68.
- Platia G. 2010. Descriptions of fourteen new species of click beetles from the Palearctic region, with chorological notes // Quaderno di Studi e Notizie di Storia Naturale della Romagna. No.30. P.103–130.
- Platia G. & Gudenzi I. 1999. Descrizione di nuove specie di Elateridi della regione palearctica con note geonomiche e sinonimiche (Insecta Coleoptera Elateridae) // Quaderno di Studi e Notizie di Storia Naturale della Romagna. No.11. Suppl. P.17–31.
- Platia G. & Gudenzi I. 2005. Description of eleven new species of click-beetles of the palearctic region, a case of legs teratology and new records of some species of the italyan fauna // Quaderno di Studi e Notizie di Storia Naturale della Romagna. No.21. P.109–127.
- Platia G. & Gudenzi I. 2006. Click-beetle genera, species, and records new to palearctic and indomalayan regions (Insecta Coleoptera Elateridae) // Quaderno di Studi e Notizie di Storia Naturale della Romagna. No.23. P.131–156.
- Platia G. & Gudenzi I. 2009. Descriptions of new species of click beetles from the Palearctic region, with chorological notes (Insecta Coleoptera Elateridae) // Quaderno di Studi e Notizie di Storia naturale della Romagna. No.28. P.111–131.
- Prosvirov A.S. 2009. [Family Elateridae – Click-beetles] // Nasekomye Lazovskogo zapovednika. Vladivostok: Dal'nauka. P.140–144 [in Russian].
- Prosvirov A.S. & Savitsky V.Yu. 2011. On the significance of genital characters in supraspecific systematics of the elaterid subfamily Agrypninae (Coleoptera, Elateridae) // Entomological review. Vol.91. No.6. P.755–772.
- Tegshzhargal D. 1989. [A short report on the fauna of elaterid beetles (Coleoptera, Elateridae) of Mongolia] // Nasekomye Mongolii. Fasc.10. Leningrad: Nauka. P.369–370 [in Russian].